

Notice of Allowability

Application No.

10/045,783

Examiner

Alonzo Chambliss

Applicant(s)

LEE ET AL.

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to interview summary filed on 11/10/03.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the;
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No. _____.
- b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
- c) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. 3.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1 ☒ Notice of References Cited (PTO-892)
- 2 ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3 ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No. _____
- 4 ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5 ☐ Notice of Informal Patent Application (PTO-152)
- 6 ☒ Interview Summary (PTO-413), Paper No. 2.
- 7 ☒ Examiner's Amendment/Comment
- 8 ☒ Examiner's Statement of Reasons for Allowance
- 9 ☐ Other

Alonzo Chambliss
Patent Examiner
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DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Randy W. Tung on November 10, 2003.

2. The application has been amended as follow:

IN CLAIMS:

In claim 16, line 1, before " removable " insert -- the --;

In claim 18, line 10, before " photoresist layer " insert -- first --;

In claim 18, line 23, delete " device " and insert instead -- wafer --;

In claim 18, line 25, delete " chemical ".

IN DRAWINGS:

On Page 1 of the drawings, insert the word " Prior Art " below headings Figures 1A-1F.

Allowable Subject Matter

3. The following is a statement of reasons for the indication of allowance subject matter: the prior art of record does not teach or suggest the combination of a substrate having a bonding pad with a trace in electrically contact with the trace and extends a

distance horizontally from the bond pad. Depositing a removable buffer material onto the trace a location spaced a distance horizontally from the bond pad. Depositing a stress buffer layer over the substrate and encapsulating the removable buffer material, wherein a portion of the stress buffer layer is removed to expose the removable buffer material. Removing the removable buffer material to provide an opening in the stress buffer layer down to the trace. Depositing an electrically conductive material into the opening in the stress buffer layer and overlying the trace in claim 1.

A wafer having a contact pad, wherein an under bump metallurgy (UBM) structure is over the pad. Depositing a trace over the (UBM) structure, wherein a photoresist layer is over the trace at a selective position spaced a distance horizontally from the bond pad. Depositing a stress buffer layer over the wafer, wherein the stress buffer layer is planarized to expose the photoresist layer. Removing the photoresist layer to provide an opening in the stress buffer layer down to the trace. Depositing an electrically conductive material into the opening in the stress buffer layer in claim 18.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning the communication or earlier communications from the examiner should be directed to Alonzo Chambliss whose telephone number is (703) 306-9143. The fax phone number for the Group is (703) 308-772 or 7724.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 308-7956.

AC/November 10, 2003

A handwritten signature in cursive script, appearing to read "Alonzo Chambliss".

Alonzo Chambliss
Patent Examiner
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